Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B01_CUR_XXXX
Attribute ID
Annual Mean Temperature in the decade (reanalysis data)
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Annual Mean Temperature in the decade (reanalysis data)
Methodology
Zonal average of the Annual Mean Temperature pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
1970, 1980, 1990, 2000, 2010
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B01_P45_XXXX
Attribute ID
Annual Mean Temperature in the decade (projection rcp 4.5 data)
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Annual Mean Temperature in the decade (projection rcp 4.5 data)
Methodology
Zonal average of the Annual Mean Temperature pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions for projections: temperature averages between models 'access1_0', 'bcc_csm1_1_m', 'gfdl_esm2m', 'hadgem2_cc', 'ipsl_cm5a_lr', 'noresm1_m', with ensemble members r1i1p1

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B01_P85_XXXX
Attribute ID
Annual Mean Temperature in the decade (projection rcp 8.5 data)
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Annual Mean Temperature in the decade (projection rcp 8.5 data)
Methodology
Zonal average of the Annual Mean Temperature pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions for projections: temperature averages between models 'access1_0', 'bcc_csm1_1_m', 'gfdl_esm2m', 'hadgem2_cc', 'ipsl_cm5a_lr', 'noresm1_m', with ensemble members r1i1p1

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B04_CUR_XXXX
Attribute ID
Temperature Seasonality (standard deviation ×100) - reanalysis data
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Temperature Seasonality (standard deviation ×100) - reanalysis data
Methodology
Zonal average of the Temperature Seasonality pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
1970, 1980, 1990, 2000, 2010
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B04_P45_XXXX
Attribute ID
Temperature Seasonality (standard deviation ×100) - projection rcp 4.5 data
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Temperature Seasonality (standard deviation ×100) - projection rcp 4.5 data
Methodology
Zonal average of the Temperature Seasonality pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions for projections: temperature averages between models 'access1_0', 'bcc_csm1_1_m', 'gfdl_esm2m', 'hadgem2_cc', 'ipsl_cm5a_lr', 'noresm1_m', with ensemble members r1i1p1

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B04_P85_XXXX
Attribute ID
Temperature Seasonality (standard deviation ×100) - projection rcp 8.5 data
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Temperature Seasonality (standard deviation ×100) - projection rcp 8.5 data
Methodology
Zonal average of the Temperature Seasonality pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions for projections: temperature averages between models 'access1_0', 'bcc_csm1_1_m', 'gfdl_esm2m', 'hadgem2_cc', 'ipsl_cm5a_lr', 'noresm1_m', with ensemble members r1i1p1

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B07_CUR_XXXX
Attribute ID
Temperature Annual Range - reanalysis data
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Temperature Annual Range - reanalysis data
Methodology
Zonal average of the Temperature Annual Range pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
1970, 1980, 1990, 2000, 2010
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B07_P45_XXXX
Attribute ID
Temperature Annual Range - projection rcp 4.5 data
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Temperature Annual Range - projection rcp 4.5 data
Methodology
Zonal average of the Temperature Annual Range pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions for projections: temperature averages between models 'access1_0', 'bcc_csm1_1_m', 'gfdl_esm2m', 'hadgem2_cc', 'ipsl_cm5a_lr', 'noresm1_m', with ensemble members r1i1p1

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B07_P85_XXXX
Attribute ID
Temperature Annual Range - projection rcp 8.5 data
Units
°C
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Temperature Annual Range - projection rcp 8.5 data
Methodology
Zonal average of the Temperature Annual Range pixels values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions for projections: temperature averages between models 'access1_0', 'bcc_csm1_1_m', 'gfdl_esm2m', 'hadgem2_cc', 'ipsl_cm5a_lr', 'noresm1_m', with ensemble members r1i1p1

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B12_CUR_XXXX
Attribute ID
Annual Precipitation mean in the decade - reanalysis data
Units
mm $year^{-1}$
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Annual Precipitation mean in the decade - reanalysis data
Methodology
Zonal average of the Annual Precipitation mean in the decade pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
1970, 1980, 1990, 2000, 2010
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B12_P45_XXXX
Attribute ID
Annual Precipitation mean in the decade - projection rcp 4.5 data
Units
mm $year^{-1}$
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Annual Precipitation mean in the decade - projection rcp 4.5 data
Methodology
Zonal average of the Annual Precipitation mean in the decade pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions for projections: temperature averages between models 'access1_0', 'bcc_csm1_1_m', 'gfdl_esm2m', 'hadgem2_cc', 'ipsl_cm5a_lr', 'noresm1_m', with ensemble members r1i1p1

Indicator thematic area
Climate
Indicator group
Bioclimatic indicators
Indicator Code
CL_B12_P85_XXXX
Attribute ID
Annual Precipitation mean in the decade - projection rcp 8.5 data
Units
mm $year^{-1}$
Data Source
Wouters, H., (2021): Global bioclimatic indicators from 1979 to 2018 derived from reanalysis. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.bce175f0 (Accessed on 07-August-2024)
Indicator description
Annual Precipitation mean in the decade - projection rcp 8.5 data
Methodology
Zonal average of the Annual Precipitation mean in the decade pixels values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions for projections: temperature averages between models 'access1_0', 'bcc_csm1_1_m', 'gfdl_esm2m', 'hadgem2_cc', 'ipsl_cm5a_lr', 'noresm1_m', with ensemble members r1i1p1

Indicator thematic area
Climate
Indicator group
Climate classification
Indicator Code
CL_KOP_CUR_XXXX
Attribute ID
Köppen-Geiger classification of the majority of UC surface - current conditions
Units
categorical
Data Source
Beck, H., Zimmermann, N., McVicar, T. et al. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Sci Data 5, 180214 (2018). https://doi.org/10.1038/sdata.2018.214
Indicator description
Köppen-Geiger classification of the majority of UC surface - current conditions
Methodology
Spatial join of the Köppen-Geiger classification layer. The classification covering the greater area of the urban center is considered as the indicator value.
Methodology Short
Spatial join
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Climate classification
Indicator Code
CL_KOP_119_XXXX
Attribute ID
Köppen-Geiger classification of the majority of UC surface - projection ssp 119
Units
categorical
Data Source
Beck, H., Zimmermann, N., McVicar, T. et al. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Sci Data 5, 180214 (2018). https://doi.org/10.1038/sdata.2018.214
Indicator description
Köppen-Geiger classification of the majority of UC surface - projection ssp 119
Methodology
Spatial join of the Köppen-Geiger classification layer. The classification covering the greater area of the urban center is considered as the indicator value.
Methodology Short
Spatial join
Temporal Coverage
2040, 2070
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Climate classification
Indicator Code
CL_KOP_126_XXXX
Attribute ID
Köppen-Geiger classification of the majority of UC surface - projection ssp 126
Units
categorical
Data Source
Beck, H., Zimmermann, N., McVicar, T. et al. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Sci Data 5, 180214 (2018). https://doi.org/10.1038/sdata.2018.214
Indicator description
Köppen-Geiger classification of the majority of UC surface - projection ssp 126
Methodology
Spatial join of the Köppen-Geiger classification layer. The classification covering the greater area of the urban center is considered as the indicator value.
Methodology Short
Spatial join
Temporal Coverage
2040, 2070
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Climate classification
Indicator Code
CL_KOP_245_XXXX
Attribute ID
Köppen-Geiger classification of the majority of UC surface - projection ssp 245
Units
categorical
Data Source
Beck, H., Zimmermann, N., McVicar, T. et al. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Sci Data 5, 180214 (2018). https://doi.org/10.1038/sdata.2018.214
Indicator description
Köppen-Geiger classification of the majority of UC surface - projection ssp 245
Methodology
Spatial join of the Köppen-Geiger classification layer. The classification covering the greater area of the urban center is considered as the indicator value.
Methodology Short
Spatial join
Temporal Coverage
2040, 2070
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Climate classification
Indicator Code
CL_KOP_370_XXXX
Attribute ID
Köppen-Geiger classification of the majority of UC surface - projection ssp 370
Units
categorical
Data Source
Beck, H., Zimmermann, N., McVicar, T. et al. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Sci Data 5, 180214 (2018). https://doi.org/10.1038/sdata.2018.214
Indicator description
Köppen-Geiger classification of the majority of UC surface - projection ssp 370
Methodology
Spatial join of the Köppen-Geiger classification layer. The classification covering the greater area of the urban center is considered as the indicator value.
Methodology Short
Spatial join
Temporal Coverage
2040, 2070
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Climate classification
Indicator Code
CL_KOP_434_XXXX
Attribute ID
Köppen-Geiger classification of the majority of UC surface - projection ssp 434
Units
categorical
Data Source
Beck, H., Zimmermann, N., McVicar, T. et al. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Sci Data 5, 180214 (2018). https://doi.org/10.1038/sdata.2018.214
Indicator description
Köppen-Geiger classification of the majority of UC surface - projection ssp 434
Methodology
Spatial join of the Köppen-Geiger classification layer. The classification covering the greater area of the urban center is considered as the indicator value.
Methodology Short
Spatial join
Temporal Coverage
2040, 2070
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Climate classification
Indicator Code
CL_KOP_460_XXXX
Attribute ID
Köppen-Geiger classification of the majority of UC surface - projection ssp 460
Units
categorical
Data Source
Beck, H., Zimmermann, N., McVicar, T. et al. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Sci Data 5, 180214 (2018). https://doi.org/10.1038/sdata.2018.214
Indicator description
Köppen-Geiger classification of the majority of UC surface - projection ssp 460
Methodology
Spatial join of the Köppen-Geiger classification layer. The classification covering the greater area of the urban center is considered as the indicator value.
Methodology Short
Spatial join
Temporal Coverage
2040, 2070
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Climate classification
Indicator Code
CL_KOP_585_XXXX
Attribute ID
Köppen-Geiger classification of the majority of UC surface - projection ssp 585
Units
categorical
Data Source
Beck, H., Zimmermann, N., McVicar, T. et al. Present and future Köppen-Geiger climate classification maps at 1-km resolution. Sci Data 5, 180214 (2018). https://doi.org/10.1038/sdata.2018.214
Indicator description
Köppen-Geiger classification of the majority of UC surface - projection ssp 585
Methodology
Spatial join of the Köppen-Geiger classification layer. The classification covering the greater area of the urban center is considered as the indicator value.
Methodology Short
Spatial join
Temporal Coverage
2040, 2070
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Renewable potential
Indicator Code
CL_REN_PVO_XXXX
Attribute ID
Average daily PV potential
Units
kWh/kWp
Data Source
Photovoltaic power potential obtained from the “Global Solar Atlas 2.0, a free, web-based application is developed and operated by the company Solargis s.r.o. on behalf of the World Bank Group, utilizing Solargis data, with funding provided by the Energy Sector Management Assistance Program (ESMAP). For additional information: https://globalsolaratlas.info. Access 21/06/2024
Indicator description
Average daily PV potential
Methodology
Zonal average of the Photovoltaic power potential layer in the decade pixels values touching the urban center
Methodology Short
Zonal statistics (avg)
Temporal Coverage
2020
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Renewable potential
Indicator Code
CL_REN_W01_XXXX
Attribute ID
Mean wind speed at 10 m above ground
Units
m/s
Data Source
Neil N. Davis, Jake Badger, Andrea N. Hahmann, Brian O. Hansen, Niels G. Mortensen, Mark Kelly, Xiaoli G. Larsén, Bjarke T. Olsen, Rogier Floors, Gil Lizcano, Pau Casso, Oriol Lacave, Albert Bosch, Ides Bauwens, Oliver James Knight, Albertine Potter van Loon, Rachel Fox, Tigran Parvanyan, Søren Bo Krohn Hansen, Duncan Heathfield, Marko Onninen, Ray Drummond; *The Global Wind Atlas: A high-resolution dataset of climatologies and associated web-based application*; Bulletin of the American Meteorological Society, Volume 104: Issue 8, Pages E1507-E1525, August 2023, DOI: https://doi.org/10.1175/BAMS-D-21-0075.1 Global Wind Speed obtained from the Global Wind Atlas version 3.3, a free, web-based application developed, owned and operated by the Technical University of Denmark (DTU). The Global Wind Atlas version 3.3 is released in partnership with the World Bank Group, utilizing data provided by Vortex, using funding provided by the Energy Sector Management Assistance Program (ESMAP). For additional information: https://globalwindatlas.info.
Indicator description
Mean wind speed at 10 m above ground
Methodology
Zonal average of wind speed at 10 m layer in the decade pixels values touching the urban center
Methodology Short
Zonal statistics (avg)
Temporal Coverage
2020
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Renewable potential
Indicator Code
CL_REN_W05_XXXX
Attribute ID
Mean wind speed at 50 m above ground
Units
m/s
Data Source
Neil N. Davis, Jake Badger, Andrea N. Hahmann, Brian O. Hansen, Niels G. Mortensen, Mark Kelly, Xiaoli G. Larsén, Bjarke T. Olsen, Rogier Floors, Gil Lizcano, Pau Casso, Oriol Lacave, Albert Bosch, Ides Bauwens, Oliver James Knight, Albertine Potter van Loon, Rachel Fox, Tigran Parvanyan, Søren Bo Krohn Hansen, Duncan Heathfield, Marko Onninen, Ray Drummond; *The Global Wind Atlas: A high-resolution dataset of climatologies and associated web-based application*; Bulletin of the American Meteorological Society, Volume 104: Issue 8, Pages E1507-E1525, August 2023, DOI: https://doi.org/10.1175/BAMS-D-21-0075.1 Global Wind Speed obtained from the Global Wind Atlas version 3.3, a free, web-based application developed, owned and operated by the Technical University of Denmark (DTU). The Global Wind Atlas version 3.3 is released in partnership with the World Bank Group, utilizing data provided by Vortex, using funding provided by the Energy Sector Management Assistance Program (ESMAP). For additional information: https://globalwindatlas.info.
Indicator description
Mean wind speed at 50 m above ground
Methodology
Zonal average of wind speed at 50 m layer in the decade pixels values touching the urban center
Methodology Short
Zonal statistics (avg)
Temporal Coverage
2020
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Renewable potential
Indicator Code
CL_REN_W10_XXXX
Attribute ID
Mean wind speed at 100 m above ground
Units
m/s
Data Source
Neil N. Davis, Jake Badger, Andrea N. Hahmann, Brian O. Hansen, Niels G. Mortensen, Mark Kelly, Xiaoli G. Larsén, Bjarke T. Olsen, Rogier Floors, Gil Lizcano, Pau Casso, Oriol Lacave, Albert Bosch, Ides Bauwens, Oliver James Knight, Albertine Potter van Loon, Rachel Fox, Tigran Parvanyan, Søren Bo Krohn Hansen, Duncan Heathfield, Marko Onninen, Ray Drummond; *The Global Wind Atlas: A high-resolution dataset of climatologies and associated web-based application*; Bulletin of the American Meteorological Society, Volume 104: Issue 8, Pages E1507-E1525, August 2023, DOI: https://doi.org/10.1175/BAMS-D-21-0075.1 Global Wind Speed obtained from the Global Wind Atlas version 3.3, a free, web-based application developed, owned and operated by the Technical University of Denmark (DTU). The Global Wind Atlas version 3.3 is released in partnership with the World Bank Group, utilizing data provided by Vortex, using funding provided by the Energy Sector Management Assistance Program (ESMAP). For additional information: https://globalwindatlas.info.
Indicator description
Mean wind speed at 100 m above ground
Methodology
Zonal average of wind speed at 100 m layer in the decade pixels values touching the urban center
Methodology Short
Zonal statistics (avg)
Temporal Coverage
2020
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Renewable potential
Indicator Code
CL_REN_W15_XXXX
Attribute ID
Mean wind speed at 150 m above ground
Units
m/s
Data Source
Neil N. Davis, Jake Badger, Andrea N. Hahmann, Brian O. Hansen, Niels G. Mortensen, Mark Kelly, Xiaoli G. Larsén, Bjarke T. Olsen, Rogier Floors, Gil Lizcano, Pau Casso, Oriol Lacave, Albert Bosch, Ides Bauwens, Oliver James Knight, Albertine Potter van Loon, Rachel Fox, Tigran Parvanyan, Søren Bo Krohn Hansen, Duncan Heathfield, Marko Onninen, Ray Drummond; *The Global Wind Atlas: A high-resolution dataset of climatologies and associated web-based application*; Bulletin of the American Meteorological Society, Volume 104: Issue 8, Pages E1507-E1525, August 2023, DOI: https://doi.org/10.1175/BAMS-D-21-0075.1 Global Wind Speed obtained from the Global Wind Atlas version 3.3, a free, web-based application developed, owned and operated by the Technical University of Denmark (DTU). The Global Wind Atlas version 3.3 is released in partnership with the World Bank Group, utilizing data provided by Vortex, using funding provided by the Energy Sector Management Assistance Program (ESMAP). For additional information: https://globalwindatlas.info.
Indicator description
Mean wind speed at 150 m above ground
Methodology
Zonal average of wind speed at 150 m layer in the decade pixels values touching the urban center
Methodology Short
Zonal statistics (avg)
Temporal Coverage
2020
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Renewable potential
Indicator Code
CL_REN_W20_XXXX
Attribute ID
Mean wind speed at 200 m above ground
Units
m/s
Data Source
Neil N. Davis, Jake Badger, Andrea N. Hahmann, Brian O. Hansen, Niels G. Mortensen, Mark Kelly, Xiaoli G. Larsén, Bjarke T. Olsen, Rogier Floors, Gil Lizcano, Pau Casso, Oriol Lacave, Albert Bosch, Ides Bauwens, Oliver James Knight, Albertine Potter van Loon, Rachel Fox, Tigran Parvanyan, Søren Bo Krohn Hansen, Duncan Heathfield, Marko Onninen, Ray Drummond; *The Global Wind Atlas: A high-resolution dataset of climatologies and associated web-based application*; Bulletin of the American Meteorological Society, Volume 104: Issue 8, Pages E1507-E1525, August 2023, DOI: https://doi.org/10.1175/BAMS-D-21-0075.1 Global Wind Speed obtained from the Global Wind Atlas version 3.3, a free, web-based application developed, owned and operated by the Technical University of Denmark (DTU). The Global Wind Atlas version 3.3 is released in partnership with the World Bank Group, utilizing data provided by Vortex, using funding provided by the Energy Sector Management Assistance Program (ESMAP). For additional information: https://globalwindatlas.info.
Indicator description
Mean wind speed at 200 m above ground
Methodology
Zonal average of wind speed at 200 m layer in the decade pixels values touching the urban center
Methodology Short
Zonal statistics (avg)
Temporal Coverage
2020
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Warm Days
Indicator Code
CL_WDS_CUR_XXXX
Attribute ID
Percentage of days with maximum temperature - reanalysis data
Units
%
Data Source
Sandstad, M., Schwingshackl, C., Iles, C., (2022): Climate extreme indices and heat stress indicators derived from CMIP6 global climate projections. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.776e08bd (Accessed on 29-August-2024)
Indicator description
Percentage of days with maximum temperature above the corresponding calendar day 90th percentile of maximum temperature for a 5-day moving window in the base period 1961-1990 - reanalysis data
Methodology
Zonal average of the data layer pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
1970, 1980, 1990, 2000, 2010
Uncertainties & Best practices
Assumptions: model 'ec_earth3', with ensemble members r1i1p1f1

Indicator thematic area
Climate
Indicator group
Warm Days
Indicator Code
CL_WDS_126_XXXX
Attribute ID
Percentage of days with maximum temperature - projection ssp 126
Units
%
Data Source
Sandstad, M., Schwingshackl, C., Iles, C., (2022): Climate extreme indices and heat stress indicators derived from CMIP6 global climate projections. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.776e08bd (Accessed on 29-August-2024)
Indicator description
Percentage of days with maximum temperature above the corresponding calendar day 90th percentile of maximum temperature for a 5-day moving window in the base period 1961-1990 - projection ssp 126
Methodology
Zonal average of the data layer pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions: model 'ec_earth3', with ensemble members r1i1p1f1

Indicator thematic area
Climate
Indicator group
Warm Days
Indicator Code
CL_WDS_245_XXXX
Attribute ID
Percentage of days with maximum temperature - projection ssp 245
Units
%
Data Source
Sandstad, M., Schwingshackl, C., Iles, C., (2022): Climate extreme indices and heat stress indicators derived from CMIP6 global climate projections. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.776e08bd (Accessed on 29-August-2024)
Indicator description
Percentage of days with maximum temperature above the corresponding calendar day 90th percentile of maximum temperature for a 5-day moving window in the base period 1961-1990 - projection ssp 245
Methodology
Zonal average of the data layer pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions: model 'ec_earth3', with ensemble members r1i1p1f1

Indicator thematic area
Climate
Indicator group
Warm Days
Indicator Code
CL_WDS_370_XXXX
Attribute ID
Percentage of days with maximum temperature - projection ssp 370
Units
%
Data Source
Sandstad, M., Schwingshackl, C., Iles, C., (2022): Climate extreme indices and heat stress indicators derived from CMIP6 global climate projections. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.776e08bd (Accessed on 29-August-2024)
Indicator description
Percentage of days with maximum temperature above the corresponding calendar day 90th percentile of maximum temperature for a 5-day moving window in the base period 1961-1990 - projection ssp 370
Methodology
Zonal average of the data layer pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions: model 'ec_earth3', with ensemble members r1i1p1f1

Indicator thematic area
Climate
Indicator group
Warm Days
Indicator Code
CL_WDS_585_XXXX
Attribute ID
Percentage of days with maximum temperature - projection ssp 585
Units
%
Data Source
Sandstad, M., Schwingshackl, C., Iles, C., (2022): Climate extreme indices and heat stress indicators derived from CMIP6 global climate projections. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.776e08bd (Accessed on 29-August-2024)
Indicator description
Percentage of days with maximum temperature above the corresponding calendar day 90th percentile of maximum temperature for a 5-day moving window in the base period 1961-1990 - projection ssp 585
Methodology
Zonal average of the data layer pixel values touching the urban center.
Methodology Short
Zonal Statistics (avg)
Temporal Coverage
2020, 2030
Uncertainties & Best practices
Assumptions: model 'ec_earth3', with ensemble members r1i1p1f1

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A01_XXXX
Attribute ID
Share of urban center area in “compact highrise” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “compact highrise” Local Climate Zone
Methodology
Share of area of the urban center classified as “compact highrise” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A02_XXXX
Attribute ID
Share of urban center area in “compact midrise” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “compact midrise” Local Climate Zone
Methodology
Share of area of the urban center classified as “compact midrise” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A03_XXXX
Attribute ID
Share of urban center area in “compact lowrise” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “compact lowrise” Local Climate Zone
Methodology
Share of area of the urban center classified as “compact lowrise” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A04_XXXX
Attribute ID
Share of urban center area in “open highrise” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “open highrise” Local Climate Zone
Methodology
Share of area of the urban center classified as “open highrise” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A05_XXXX
Attribute ID
Share of urban center area in “open midrise” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “open midrise” Local Climate Zone
Methodology
Share of area of the urban center classified as “open midrise” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A06_XXXX
Attribute ID
Share of urban center area in “open lowrise” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “open lowrise” Local Climate Zone
Methodology
Share of area of the urban center classified as “open lowrise” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A07_XXXX
Attribute ID
Share of urban center area in “lightweight lowrise” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “lightweight lowrise” Local Climate Zone
Methodology
Share of area of the urban center classified as “lightweight lowrise” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A08_XXXX
Attribute ID
Share of urban center area in “large lowrise” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “large lowrise” Local Climate Zone
Methodology
Share of area of the urban center classified as “large lowrise” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A09_XXXX
Attribute ID
Share of urban center area in “sparsely built” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “sparsely built” Local Climate Zone
Methodology
Share of area of the urban center classified as “sparsely built” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A10_XXXX
Attribute ID
Share of urban center area in “heavy industry” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “heavy industry” Local Climate Zone
Methodology
Share of area of the urban center classified as “heavy industry” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A11_XXXX
Attribute ID
Share of urban center area in “dense trees” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “dense trees” Local Climate Zone
Methodology
Share of area of the urban center classified as “dense trees” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A12_XXXX
Attribute ID
Share of urban center area in “scattered trees” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “scattered trees” Local Climate Zone
Methodology
Share of area of the urban center classified as “scattered trees” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A13_XXXX
Attribute ID
Share of urban center area in “bush, scrub” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “bush, scrub” Local Climate Zone
Methodology
Share of area of the urban center classified as “bush, scrub” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A14_XXXX
Attribute ID
Share of urban center area in “low plants” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “low plants” Local Climate Zone
Methodology
Share of area of the urban center classified as “low plants” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A15_XXXX
Attribute ID
Share of urban center area in “bare rock or paved” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “bare rock or paved” Local Climate Zone
Methodology
Share of area of the urban center classified as “bare rock or paved” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A16_XXXX
Attribute ID
Share of urban center area in “bare soil or sand” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “bare soil or sand” Local Climate Zone
Methodology
Share of area of the urban center classified as “bare soil or sand” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices

Indicator thematic area
Climate
Indicator group
Local climate Zone
Indicator Code
CL_LCZ_A17_XXXX
Attribute ID
Share of urban center area in “water” Local Climate Zone
Units
Categorical
Data Source
Demuzere M, Kittner J, Martilli A, et al. A global map of local climate zones to support earth system modelling and urban-scale environmental science. Earth Syst Sci Data. 2022a; 14(8):3835-3873. doi:10.5194/essd-14-3835-2022. https://essd.copernicus.org/articles/14/3835/2022/ Demuzere M, Kittner J, Martilli A, et al. Global Local Climate Zone map. Zenodo (2022b) doi:10.5281/zenodo.6364594. https://zenodo.org/records/8419340
Indicator description
Share of urban center area that is classified as “water” Local Climate Zone
Methodology
Share of area of the urban center classified as “water” over total urban center area.
Methodology Short
Ratio
Temporal Coverage
2025
Uncertainties & Best practices